DAILY CURRENT AFFAIRS

Time: 45 min **Date: 26-10-2023**

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Completely Eradicate Manual Scavenging: SC to Govt.

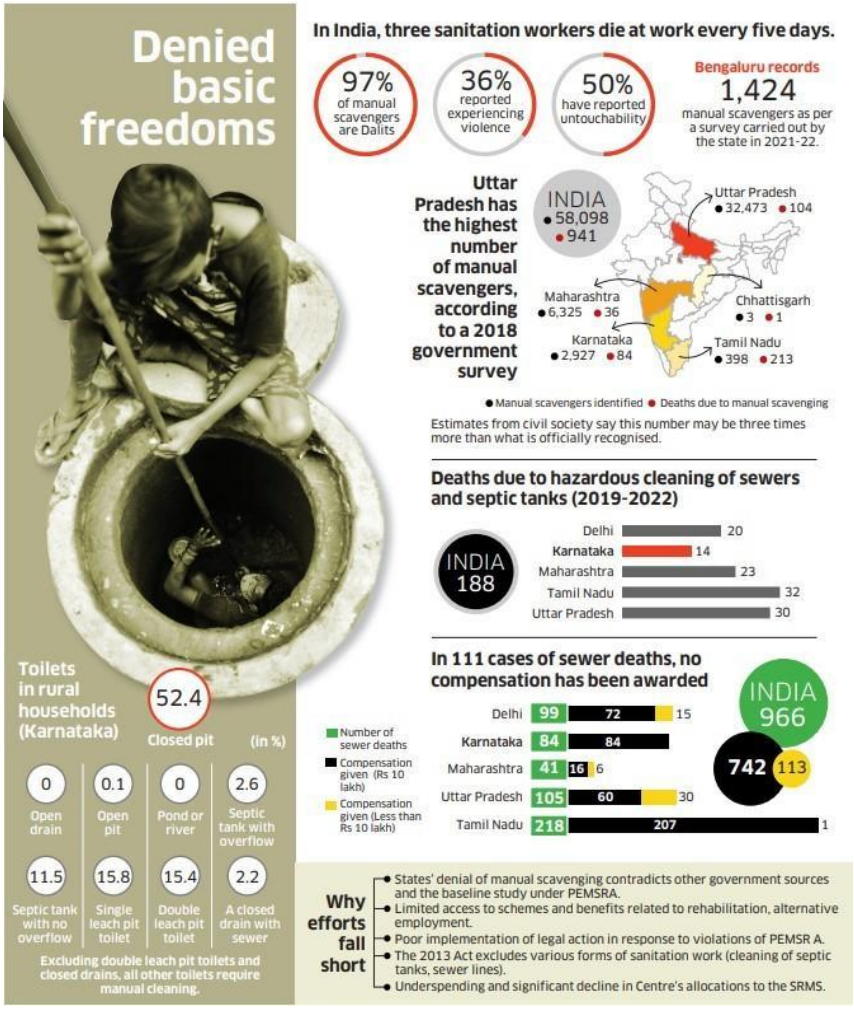
Syllabus: GS2/ Social Justice

In News

- The Supreme Court of India has issued directives to the Centre and state governments regarding for effective implementation of the **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**.

SC Directions

- The governments (Centre and states) have been directed to provide compensation of **Rs 30 lakh to the families of individuals** who lose their lives while engaged in sewer cleaning.
- The court has asked for enhancing the **compensation in cases of sewer deaths and injuries**. Those who suffer permanent disabilities while cleaning sewers will be paid Rs 20 lakh as minimum compensation, and for other injuries, a compensation up to Rs 10 lakh can be paid to the victims.
- For rehabilitation of victims and their families, provide s**cholarships and skill programs.**



Manual Scavenging

- Manual scavenging is the practice of removing human excreta by hand from sewers or septic tanks.

- It is a dehumanizing practice **that has been banned in India under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act**, 2013 (PEMSR).
- Despite the ban, manual scavenging is still prevalent in many parts of India due to the lack of enforcement of the Act, exploitation of unskilled labourers, and caste, class, and income divides.

Why Manual scavenging continues to exist in India?

- **Caste System**: Deep-seated caste-based discrimination traps many in this occupation.
    - **Example:** According to the Ministry of Social Justice & Empowerment out of 43,797 manual scavengers, 42,594 belong to Scheduled Castes.
- **Lack of Alternatives**: Limited access to education and job opportunities keeps people in manual scavenging.
- **Weak Law Enforcement**: Inadequate implementation of anti-manual scavenging laws.
- **Inadequate Sanitary Infrastructure**: Lack of modern sanitation systems necessitates manual cleaning.
- **Economic Factors**: Cheap labour costs make manual scavenging financially attractive.

Government of India's initiatives to restrict manual scavenging

- **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**: The law bans manual scavenging and provides for rehabilitation.
    - Violation of the act is punishable with **imprisonment up to 2 years or a fine up to Rs. 1 Lakh or both.**
- **Swachh Bharat Abhiyan**: Aims to promote sanitation and reduce manual scavenging.
- **National Action Plan for Mechanised Sanitation Ecosystem (NAMASTE):** Collaborative effort between the Ministry of Housing and Urban Affairs and the Ministry of Social Justice and Empowerment, with the objective of eliminating hazardous manual cleaning of sewer and septic tanks.
- **Rehabilitation Programs:** Offers financial aid, skill development, and employment opportunities.
    - **Example: Rashtriya Garima Abhiyaan:** National Campaign focused on eradicating the dehumanizing practice of manual scavenging and ensuring comprehensive rehabilitation for manual scavengers throughout India.
- **Community Awareness**: Conducts campaigns to change societal attitudes.

Conclusion

- The challenge in eradicating manual scavenging lies in effective enforcement of laws, changing deep-rooted social attitudes, and providing meaningful alternatives and rehabilitation to those involved in manual scavenging.
- To eliminate manual scavenging both the government and society must actively engage to assess and eradicate this issue.

Source: Economic Times

Simultaneous Polls: Law Commission Shares Strategy

Syllabus: GS2/Indian Polity/Governance

Context

- The Law Commission of India **presented a roadmap to a panel on simultaneous polls 'One Nation, One Election'** led by former President of India, Ram Nath Kovind.

About:

- The Law Commission of India made a presentation to the **'high-level committee'** headed by former President Ram Nath Kovind on its **'suggestions and viewpoints'** regarding simultaneous elections, and working on **a formula to synchronise all assembly polls** by extending or reducing the tenure so that these elections can be held **along with the Lok Sabha polls** 2029 onwards.
    - The **committee** has been asked to *'examine and make recommendations for holding simultaneous elections to the Lok Sabha, State assemblies, municipalities, and panchayats, keeping in view the existing framework under the Constitution of India and other statutory provisions'*.
- The law panel is devising a mechanism to ensure a common electoral roll for Lok Sabha, assemblies and local bodies to reduce cost and use of manpower for undertaking an almost identical exercise which is carried out now by the Election Commission and various state election commissions.

Law Commission of India:

- It is a **non-statutory body** and is constituted by a notification of the Government of India, Ministry of Law & Justice, Department of Legal Affairs.
- **Vision:** Reforming the laws for maximising justice in society and promoting good governance under the rule of law.
- **Function:** To carry out research in the field of law and the Commission **makes recommendations** to the Government (in the form of Reports) as per its terms of reference.
- The Law Commission has taken up various subjects on references made by the Department of Legal Affairs, Supreme Court and High Courts.
    - At times, keeping in view the importance of the subject matter, the Commission **initiates study on specific subjects, suo-moto.**
- It provides excellent thought provoking and vital review of the laws in India.

'One Nation One Election' System:

- It proposes that simultaneous elections be held in all states and the Lok Sabha in a gap of five years.
    - It involves the restructuring of the Indian election cycle in a manner that elections to the states and the centre synchronise.

- The current electoral system holds separate polls for the Lok Sabha and State Assemblies in a gap of five years, i.e. when the tenure of the Lower House or the state government concludes, or either of them is dissolved prematurely.

Previous instances of simultaneous elections:

- It is not a newly conceived norm, in fact, it was previously conducted in India in 1952, 1957, 1962 and 1967, and was discontinued following the dissolution of some Legislative Assemblies between 1968 -69. Since then, the Indian Electoral system holds polls to Centre and states separately.

Arguments in favour of One Nation One Election:

- Government efforts & financial resources;
- Policy paralysis because of the 'model code of conduct';
- Pressure on parties in power;
- Engagement of security forces in election processes undermine internal security purposes;
- Hampering essential services;

Arguments against of One Nation One Election:

- **Feasibility and issue of dissolution:** *Article 83(2)* and *172* of the Constitution of India stipulates that the tenure of Lok Sabha and State Assemblies respectively will last for five years unless dissolved earlier and there can be circumstances, as in *Article 356*, wherein assemblies can be dissolved earlier.
- **Hamper federalism:** Each of India's States has different political cultures and parties. Furthermore, this is an attack on and an affront to India's federalism.
- **Logistical and Infrastructural Challenges:** By increasing the costs for deploying far larger numbers of electronic voting machines and control units.
    - **The Election Commission of India** felt that side-by-side polls would demand massive investment in Electronic Voting Machines and Voter Verifiable Paper Audit Trail (VVPAT) machines.
- **Against the diversity of India:** Simultaneous elections will hamper the regional and cultural diversities.
- **Disadvantage for regional parties;**

Implementation of 'One Nation One Election':

- Amending the provisions of the Indian Constitution:
    - **Article 172 and Article 83**: These deal with the duration of the Houses of Parliament, and guarantee a five-year term to both the elected Lok Sabha and state assemblies, unless they are dissolved sooner.
    - **Article 85:** It deals with the powers of the President to summon Parliamentary sessions, not exceeding a gap of more than six months.
    - **Article 356**: It comes into action in case of governance and constitutional failure in a state and deals with the President' Rule.

- Amendments in the **People's Representation Act, 1951** and the **Anti Defection Law** must be made for organised conduct and stability in both Lok Sabha and state assemblies.
- **Other measures** are *political consensus, election finance reforms, effective governance system, public awareness, and pilot based projects* needed for the seamless implementation of 'One Nation One Election'.

Has any other country with a federal structure tried this?

- Similar electoral arrangements are in place in **South Africa, Sweden** and the tenure of **Parliament in the UK** is determined by the **Fixed-term Parliaments Act, 2011.**
    - **In South Africa**, national as well as provincial legislature elections are held simultaneously for five years.
    - **Sweden** has a fixed date for holding polls to the ***'Riksdag'****, the national legislature,* ***'Landsting'****, the provincial legislature/county council, and* ***'Kommunfullmaktige'****, the local bodies/municipal assemblies.* They have a common term of four years.

Conclusion:

- Simultaneous election has issues like the hampering the federal structure of the Constitution, and the issue of feasibility, it needs to be discussed and debated properly across the political spectrum to assuage the concerns of regional parties.
- If simultaneous polls favour the 'People of India' and reduce the duration of conducting polls, political parties will have ample time to address national issues and enhance governance.

Source: TH

100 million hectares of arable land lost yearly to Degradation: UNCCD Data

Syllabus: GS3/Environmental pollution & degradation

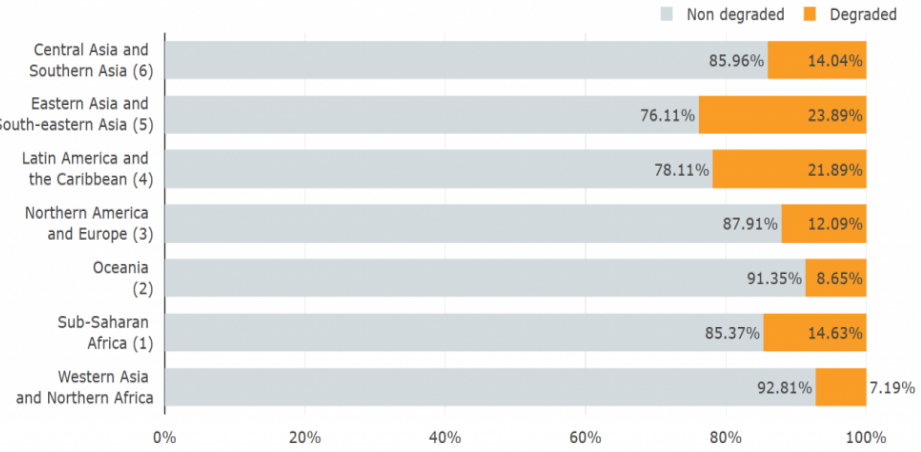
In News

- According to recently published **United Nations Convention to Combat Desertification (UNCCD)** data, from 2015-2019, the world lost at least **100 million hectares** of healthy and productive land each year.

Key Findings

- **Land degradation is accelerating in all regions of the world**, according to the UNCCD's first data dashboard, which compiled national figures from 126 countries.
- **Eastern & Central Asia, Latin America, and the Caribbean** have the most **severe degradation**, affecting at least 20% of their total land area.
- **Sub-Saharan Africa, Western and Southern Asia, Latin America, and the Caribbean** all experienced faster rates of land degradation than the global average.

- **On the positive side**, in sub-Saharan Africa, **Botswana** reduced land degradation from 36 per cent to 17 percent of its territory.
- Similarly, between 2015 and 2019, the **Dominican Republic's** proportion of degraded land decreased from 49% to 31%, with ongoing efforts to restore 240,000 hectares in the Yaque del Norte River basin and cocoa production areas in San Francisco de Macoris province.
- The **drying of the Aral Sea** has degraded three million hectares of land in **Uzbekistan.** From 2018 to 2022, Uzbekistan planted **1.6 million hectares** of saxaul to eliminate salt and dust emissions from the Aral Sea's drained bottom.
- According to the UNCCD data, if current trends continue, the world will need to restore a staggering 1.5 billion hectares of degraded land by 2030 in order to meet **land degradation neutrality (LDN**) targets enshrined in the United Nations-mandated Sustainable Development Goals.



Causes of land degradation in India

- **Deforestation:** Extensive deforestation for timber, agriculture, and developing planning regions has led to the loss of forest cover and biodiversity, making the land more vulnerable to degradation.
- **Unsustainable agricultural practices:** Such as monoculture, excessive use of chemical fertilizers, pesticides, overgrazing, and improper irrigation techniques, contribute to soil erosion led land degradation.
- **Salinization:** Salinization of soil negatively impacts plant development and induces land degradation.
- **Rapid Urbanization:** Rising demand for housing & infrastructure often led to land conversion, soil sealing, reduced groundwater recharge, and altered drainage patterns, influencing land degradation.
- **Releasing industrial pollution:** The release of pollutants, heavy metals, and chemicals from industries contaminates soil and renders it unsuitable for agriculture or other uses.
- **Changing climate patterns:** Such as increased temperatures and altered precipitation exacerbate land degradation by causing droughts, desertification, and shifts in vegetation.

Impact of land degradation

- **Desertification:** Land degradation contributes to the expansion of deserts, a process known as desertification. This can displace communities, reduce the availability of fertile land, and exacerbate poverty and resource scarcity.
- **Biodiversity loss:** Land degradation can lead to habitat destruction and fragmentation, reducing the biodiversity of affected areas. This can have cascading effects on ecosystems, potentially leading to species extinctions.
- **Reduced carbon sequestration:** Healthy soils act as carbon sinks, helping to mitigate climate change by storing carbon dioxide. Land degradation diminishes this capacity, contributing to greenhouse gas emissions.
- **Increased vulnerability to natural disasters**: Land degradation can make areas more susceptible to natural disasters such as floods and landslides, as the soil's ability to absorb and retain water is compromised.
- **Impact on Indigenous communities:** Indigenous communities are closely connected to their land for cultural and economic reasons and are prone to be disproportionately affected by land degradation, threatening their traditional ways of life.

Measures for controlling land degradation

- **Afforestation and Reforestation:** Promoting tree plantation on previously non-forested land along with restoring degraded or lost forest cover.
- **Soil conservation**: Implementing soil conservation measures, such as contour farming, terracing, and check dams, to reduce soil erosion and protect land from degradation.
- **Policies for land conservation**: Develop and implement policies and regulations that promote sustainable land use, land conservation, and responsible land management.
- **Adoption of a watershed approach:** planning based on micro-watersheds, use of remote sensing and spatial data in micro-watershed planning, for land rejuvenation. For example, the Integrated Watershed Management Programme (IWMP).
- **Sustainable practices:** Developing sustainable water management practices to prevent soil salinization and waterlogging.
- **Encouraging the judicious use of chemical fertilizers** and pesticides in agriculture to prevent soil contamination and nutrient depletion.
- **Promoting organic farming practices** and the use of organic matter along with Zero budget natural farming to improve soil fertility.

Measures taken by Government

- **National level land degradation mapping: It is taken up by ISRO along with partner institutions, under the** Natural Resources Census (NRC) mission of DOS/ISRO, towards generating information on land degradation at 1:50,000 scale.
- India is striving towards achieving the national commitments of **Land Degradation Neutrality (LDN)** and restoration of **26 million ha of degraded land by 2030** which focus on sustainable and optimum utilization of land resources.
- **India joined Bonn Challenge:** India pledged to bring into restoration 13 million hectares of degraded and deforested land by 2020, and an additional 8 million hectares by 2030.

- **The government schemes to address problems of land degradation are-**Pradhan Mantri Fasal Bima Yojana, Soil Health Card Scheme, Pradhan Mantri Krishi Sinchayee Yojana etc.
- **National Afforestation Programme:** It has been implemented since 2000 for the afforestation of degraded forest lands. It is being implemented by the Ministry of Environment, Forest and Climate Change.

Way Forward

- Land degradation conservation is a long-term commitment that requires the active engagement of governments, communities, and individuals towards the common goal of achieving land degradation neutrality. Sustainable land management practices should be tailored to the specific environmental conditions and challenges of each region to conserve land from degradation.

Source: DTE

Joint Theatre Commands

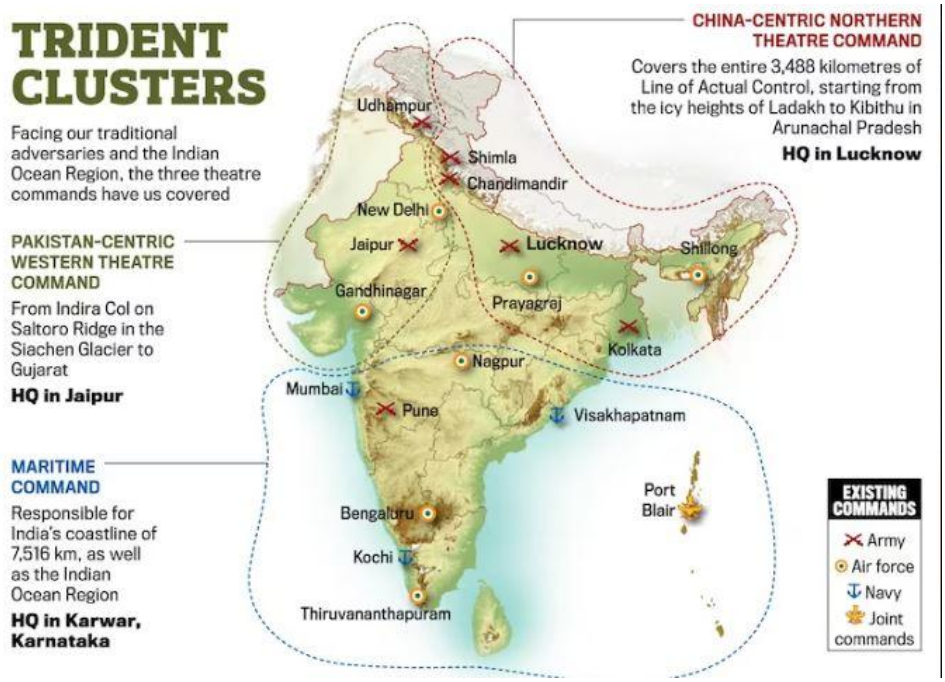
Syllabus: GS3/Defence

In News

- The Armed Forces have proposed for **theatre commanders** under a **national defence committee** likely to be headed by the **Defence Minister**.

Theatre Command

- A theatre command deploys elements of the three services i.e. the Indian Army, Indian Navy, and Indian Air Force **under a single, unified command structure.**
- Each command is assigned a **specific geographical region**, combining resources of the three services for operational roles.
- There will be **two land-based commands**—one focused on Pakistan and the other on China—**and a third maritime one,** overseeing the Indian Ocean Region.
    - The three theatre commands that will be set up first are likely to be located in **Jaipur, Lucknow and Karwar.**
- Creation of theatre commands and their structure has been under discussion for three years now.



Recent Developments

- Members of the **Chiefs of Staff Committee (COSC)** are also likely to be part of the defence committee that will oversee the work of theatre commanders.
    - The COSC comprises the **three service chiefs** and the Chief of **Defence Staff (CDS)** and takes important decisions related to matters of higher defence.
- As per current plans, the structural changes, owing to the theaterisation plans, are also likely to involve **appointment of a Vice CDS and a Deputy CDS**.

Need for the Theatre Command

- **Hostile Neighborhood:** The main threat is now from **China,** which works in collusion with **Pakistan**. A two-front war is, therefore, a distinct possibility for India. The prospect of high technology, multi-domain warfare where adversaries are **nuclear-armed** requires a swift and dynamic response.
- **Optimal use of Resources:** The forces will be able to pool their resources efficiently, resulting in the optimum utilisation of platforms, weapon systems, and assets.
    - This will also prevent resources from being allocated for duplicate purchases for the three services.
- **Help in Logistics:** Theatre commands, in the long run, could also improve logistics management in the forces.
- **Better Coordination:** Currently, India's multiple military commands are all located in different geographical areas. This, at times, causes communication hindrances during joint operations and exercises. With a unified command structure, these communication processes could be simpler and more efficient.

- **In Practice in other Nations:** Armed forces of major military powers, including the United States, the United Kingdom, Russia, China and France all operate under theatre commands.
- **Efficient Planning:** Further, in the realm of policy, having a unified command structure with representatives from all three services will also lead to more efficient planning for both peacetime and wartime strategies.

Challenges in Implementation

- **Difference of opinion among three forces:** There are differences among the three forces on scope, structure, and control of the commands.
- **Transfer of Resources:** There is a contention on the kind of war-fighting equipment that will be deployed under a single command and ambiguity surrounding the transfer of weapons, platforms, and resources from one theatre command to another.
- **Curriculum Framework:** In terms of preparing the educational bedrock for military personnel to serve in theatre commands, the country seems to be behind the curve.
- **Lack of NSS:** Many retired military professionals have criticised implementing theatre commands without having a coherent National Security Strategy (NSS). Theatre commands will not have a clear blueprint and policy objective to work towards without an NSS.

Conclusion

- As India moves towards implementing its biggest military overhaul, which could be a force multiplier, a few institutional and ideational changes will have to be incorporated to find the correct balance in such a transformation.
- Given the threat India faces on its northern and western borders, integrated theatre commands and the roles assigned will be key in dealing with any future conflict.

Source: IE

World Energy Outlook-2023 Report

Syllabus: GS3/Environment

In News

- The **International Energy Agency (IEA)** has released its **World Energy Outlook 2023.**

Key highlights of the Report

- Fossil fuel share in the global energy supply is projected to **reduce from around 80% to 73% by 2030**. Global energy-related carbon dioxide (CO_2) emissions peaking by 2025.
- **India** will record the **highest growth in demand for energy** among countries or regions over the **next three decades**.

- **Power consumption** for running **household air conditioners** alone is estimated to rise **nine-fold by 2050**.
- By 2030, India's industry will emit **30% less CO2 (carbon dioxide)**, and each km driven on Indian roads by a **passenger car will emit 25% less CO2.**
- As part of its energy development, India is entering a **dynamic new phase** marked by a long-term net zero emissions ambition, increased regulatory sophistication, a focus on clean energy deployment, and the establishment of domestic clean energy technology supply chains.

Suggestions recommended

- **Clean Energy Transition** such as encouraging a transition towards cleaner and more sustainable energy sources, such as renewable energy (solar, wind, hydro), to reduce greenhouse gas emissions and combat climate change.
- **Increase investments in renewable energy** infrastructure, including solar and wind power projects, to meet growing energy demand and reduce dependence on fossil fuels.
- **Promoting electrification of the transportation sector**, including the development of electric vehicles (EVs) and the necessary charging infrastructure.
- **Implementation of carbon pricing mechanism**s, such as carbon taxes or cap-and-trade systems, to incentivize emissions reduction efforts.
- **Engaging in international partnerships** and collaborations to access technology, expertise, and financing for sustainable energy projects.
- **Implementing measures to address air pollution**, including stricter emissions standards for vehicles and industries, to improve public health and reduce environmental damage.

International Energy Agency

- The IEA was established in November 1974 by members of **OECD in response to the 1973 oil crisis**, with the primary goal of coordinating measures to deal with potential energy supply disruptions.
- It is **headquartered in Paris, France.**
- **India joined IEA as Associate member** in 2017.
- One of the core functions of the IEA is to enhance global energy security by promoting measures to ensure stable and secure energy supplies.
- Member countries of the IEA maintain strategic oil reserves equivalent to at least 90 days of net oil imports, and they are committed to releasing these reserves in the event of severe disruptions in global oil supplies.
- **Reports published by IEA**- World Energy Outlook (WEO), Southeast Asia Energy Outlook

Initiatives taken by India to reduce carbon emissions

- **International Solar Alliance (ISA):** Launched in 2015, it's an alliance of the "sunshine countries" with an objective of efficient utilization of solar energy.
- **One sun, one world, one grid project along with the United Kingdom:** It is based on the vision of building and scaling inter-regional energy grids to share solar energy across the globe.
- **Accelerating e-mobility transition** with the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles Scheme.
- **Mission LiFE** is a global mass movement led by India that aims to encourage individual and collective action to protect and preserve the environment.

- **Leadership Group for Industry Transition (LeadIT)**: It is a business-led initiative that encourages companies to adopt low-carbon business practices and technologies.

Source: Times of India

Centre approves ₹22,303-cr. subsidy on key Fertilisers

Syllabus: GS3/Agriculture/Economy

Context:

- Cabinet approves ₹22,303 crore subsidy on phosphorus, potash fertilisers **for Rabi season** to ensure farmers continue to get soil nutrients at reasonable rates despite high global prices.

NBS Scheme

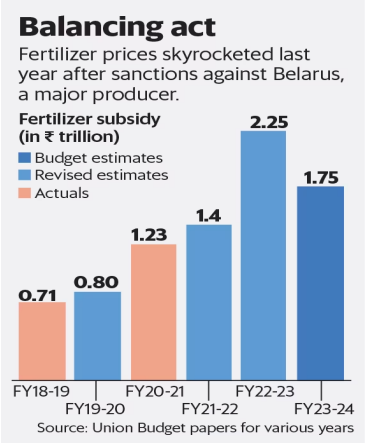
- It governs the **subsidy on P&K fertilisers**, and has been instrumental in ensuring the availability of essential nutrients to farmers at subsidised prices since 1 April 2010.
- Fertilisers available to farmers at subsidised prices through **fertiliser manufacturers or importers (not to the farmers)** as per approved and notified rates.
- NBS is applicable for *Diammonium Phosphate, Muriate of Potash, Mono Ammonium Phosphate, Triple Super Phosphate, Single Super Phosphate, Ammonium Sulphate and 16 grades of complex fertilisers.*

What are the Rabi crops?

- These are **sown in winter and harvested in spring**. These include *wheat, barley, mustard, chana (gram), masoor (lentil), peas, potato, tomato, beet, cabbage, garlic, onion, cumin, coriander, linseed, sunflower, and cauliflower* etc.

Do you know?

- The Union government allocated a subsidy of ₹1.08 lakh crore for the 2023-24 kharif season ended September, including a ₹70,000 crore subsidy for urea and ₹38,000 crore for DAP and other fertilisers.
- In the **2023-24 Union Budget**, the government had allocated ₹1.75 trillion for fertiliser subsidies and spent 55% of it in the first five months. In 2022-23 the fertiliser subsidy surged to a record-high of ₹2.55 lakh crore.



Benefits of Fertiliser Subsidy

- **Availability of Fertilisers:** It will ensure P&K fertilisers are available to farmers at affordable prices during the ongoing Rabi season.
- **Growth of agricultural productivity:** Fertiliser subsidy resulted in a tremendous growth of agricultural productivity, which was necessary for food security of the huge population of the country.
- **Effective and efficient use of government resources:** It rationalises the subsidy on P&K fertilisers, ensuring effective and efficient use of government resources.

Negative effects of Subsidy

- **Overuse of fertilisers:** Their imbalanced use of fertilisers can lead to soil degradation.
- **Delay in paying subsidy dues:** There is a huge carryover of subsidy liabilities every year due to the non-payment of subsidy bills received from companies.
    - Scarcity of funds due to an inadequate budget allocation is the major reason for the delay in settlement.
- **Expenditure on subsidy:** Over the years, the government's expenditure on fertiliser subsidy has been increasing.
    - However, it is necessary to keep providing the subsidy, it is also the government's responsibility to contain this expenditure by adopting innovative ways without increasing the prices.
- **Issue of diversion:** About 10 lakh tonnes of **agriculture-grade subsidised urea** is getting diverted every year **mainly to industries** causing **a subsidy leakage**.
- **Low efficiency of Fertiliser companies:** Fertiliser companies are operating with very old technology and systems, and not at their highest efficiency. The government bears the cost of their inefficiency in the form of higher subsidy.
- **Role of international trade:** India, **the top importer of the crop nutrient**, currently meets 30% of its demand for urea through imports from countries such as Oman, Qatar, Saudi Arabia and the UAE.

Recommendations and Solutions

- Any drastic change in the existing fertiliser subsidy policy would have a huge bearing on the food security of the country. It is recommended that:
    - It must be effected **only after an in-depth study** and wider consultations with all stakeholders;
    - **Interests of small and marginal farmers** should be firmly kept in mind;
    - Best **international practices** should be carefully studied;
    - Education and awareness of farmers about the **balanced use of fertilisers** should be **an integral part of the policy**.
- The government should take **all possible steps to reduce its expenditure** on subsidy by:

    - Modernising fertiliser manufacturing plants;
    - Adopting best practices of manufacturing and strict energy norms; and
    - Building a strong research and development base for continuously upgrading the manufacturing technology, so as to reduce the manufacturing cost.
- **Direct subsidy to farmers:** The companies should be set free to manufacture, supply, and sell fertilisers as per their own system, and the government needs to provide fertiliser subsidies **directly to farmers under Direct Benefits Transfer**.

Source: TH

Global Solar Stock-take Report

Syllabus: GS3/ Environment & Ecology

News

- **The International Solar Alliance (ISA)**, for the first time, will compile and release a **'global solar stock-take report.'**

About

- This move is inspired by the **first ever 'Global Stocktake' of the United Nations Conference of Parties, scheduled in Duba**i later this year.

Do you know?

- **The Global Stocktake follows from the Paris Agreement signed in 2015** and is expected **once in five years.**
- Countries are expected to **give an account of the actions taken until now to transition their economies away from fossil fuel and lay out plans to course correct**, if their commitments are insufficient to prevent runaway global warming.

- The **'solar stocktake'** would be released in November, 2023 and **would take stock of the progress made by countries**.
- In 2020, **nearly $300 billion of investment in solar took place and around $380 billion in 2022.** However, **manufacturing is uneven with most of it concentrated in China.** The stocktake will look at **ways to broaden this.**

International Solar Alliance (ISA)

- **Launched:** At COP21 (2015), the UN climate meeting in Paris.
- **Headquarters:** India, with its Interim Secretariat being set up in **Gurugram**.
- **Members**: It has 122 sun-belt countries as its prospective member countries and currently boasts a membership of 86 countries globally.
    - It is the **largest grouping of states, after the United Nations.**
- **Vision**: Let us together make the sun brighter.

- **Mission**: Every home no matter how far away, will have a light at home.

Sixth Annual Meeting:

- The ISA, which is steered by **India and France,** is scheduled to hold its **sixth annual meeting in Delhi**.
- A key focus area for the organisation is **expanding solar installations in Africa** and to that end the organisation has set up the **Global Solar Facility (GSF).**
    - The aim is to **boost the scale of solar investment** there and following that expand to **West Asia, Latin America and the Caribbean.**

Do you know?

- The **Global Solar Facility (GSF) was approved in the Fifth Session of the ISA Assembly**, in New Delhi, India in 2022 and later it was **announced at COP27 in Sharm-el-Sheikh on Nov 10, 2022.**
- **Mandate**: It was launched **to attract investments into the solar energy sector, in line with the ISA goal of unlocking $1 trillion in solar energy investments by 2030.**
- **Objective**: This Global Solar Facility (GSF) aims to **help alleviate the constraints of contractual and financial uncertainty for solar energy.**
- The **GSF will have three funds:**
    - a payment guarantee fund,
    - an insurance fund to mitigate project risks and
    - an investment fund for technical assistance.

Current status

- Solar photovoltaic installations globally touched **1,133 gigawatts (GW) as of 2022 with 191 GW being added in 2022.**
- **Nearly a fourth, or about 350 MW, is installed in China,** which is **not a member of the ISA.**
    - **China is followed by the United States,** a member country at 111 GW.
    - **India ranks among the top 5 countries globally with 62 GW.**

Source: TH

Facts In News

An ancient landscape under Antarctic ice

Syllabus :GS 1/Geography

In News

Scientists discovered a hidden landscape 'frozen in time' under Antarctic ice.

- Scientists used satellite photos combined with **radio-echo sounding data** to create an image of Antarctica's hidden landscape.

About Landscape

- It is located in **East Antarctica's Wilkes Land region** bordering the Indian Ocean, covering an area roughly the size of **Belgium** or the **U.S. state of Maryland.**
- It is a vast, **hidden landscape of hills** and **valleys** carved by **ancient rivers.**
    - The area spreads across 32,000 square kilometres (12,000 square miles) and was once home to trees, forests and probably animals,
- It has been "**frozen in time**" under the Antarctic ice for millions of years.
    - It has remained untouched for more than 34m years, but human-driven global warming could threaten to expose it.
- The ice above the ancient landscape measures about 2.2-3 km thick.
- It has been **modified by different processes** influenced by rivers, tectonics and glaciation over a very long period of geological time.

Do you know ?

- Antarctica was once part of the **Gondwana supercontinent** that also encompassed what is now Africa, South America, Australia, the Indian subcontinent and the Arabian Peninsula, but eventually split off and became isolated in a geological process called plate tectonics.
- In 2022, scientists discovered a city-size lake under the **East Antarctic Ice Sheet,** which was named **Lake Snow Eagle.**
- India has **three research stations** in Antarctica, namely Bharati, Dakshin Gangotri and Maitri.

Source:TH

International Migration Outlook 2023

Syllabus: GS1/Geography

In News

- The 2023 edition of International Migration Outlook has been released by the **Organization for Economic Cooperation and Development (OECD).**

Major Highlights

- **Permanent-type migration** to OECD countries increased by **26%** in 2022 compared with 2021.
- **Family migration** remained the primary category of entry for new permanent-type migrants, representing **40%** of all permanent-type migration.
- The **top origin countries for asylum** applicants in 2022 were Venezuela, Cuba, Afghanistan and Nicaragua.
- **Immigrant mothers** face a disproportionate disadvantage, the gap in employment rates between immigrant and native-born mothers is **20 percentage points.**
- India saw the **highest migration flows** to OECD countries in 2021 and 2022.
    - **India replaced China** as the main country of origin of new migrants to OECD countries in 2020.

    - In terms of nationalities, 0.13 million Indian citizens acquired the nationality of an OECD country in 2021.
- **In terms of workers,** migration flows from India , Uzbekistan and Turkey rose sharply, making them primary countries of origin after Ukraine.

About Organization for Economic Cooperation and Development

- OECD is an **intergovernmental organisation of 38 member countries**, most being rich developed nations that attract migrant workers and students.
- It was founded in **1961** to stimulate economic progress and world trade.
- The forerunner to the OECD was the Organisation for European Economic Co-operation and Development (OEEC), formed in **1947** to administer American and Canadian aid under the auspices of the Marshall Plan following World War II.
- The OECD's headquarter is in **Paris, France.**

Source: DTE

Unlawful Activities (Prevention) Tribunal

Syllabus: GS2/ Regulatory Bodies

Context

- Centre has constituted an **Unlawful Activities (Prevention) Tribunal** for adjudicating if there is sufficient cause for declaring the Jammu and Kashmir Democratic Freedom Party (JKDFP) as an unlawful association.

About UAPA Tribunal

- The UAPA (Unlawful Activities Prevention Act) establishes a tribunal to give legal validity to government bans.
- The tribunal is led by a retired or sitting High Court judge.
- Upon receiving notification from the Central government, the tribunal summons the concerned association, giving them 30 days to justify why they should not be labeled as unlawful.
- After considering arguments from both sides, the tribunal can conduct an inquiry within 6 months to determine if there is enough evidence to declare the association unlawful.
- The Centre's notification under the UAPA does not take effect until the tribunal confirms the declaration through its official order.

About UAPA

- The UAPA (Unlawful Activities Prevention Act) in India primarily aims to prevent and address unlawful activities that threaten the nation's integrity and sovereignty, often referred to as an anti-terror law.

- Unlawful activities encompass actions taken by individuals or associations with the intent to disrupt India's territorial integrity and sovereignty.
- This act grants significant authority to the central government, with the provision for severe penalties such as the death penalty and life imprisonment.

Key Provisions:

1. Designation as Terrorist: The UAPA enables the central government to designate individuals or organizations as terrorists or terrorist organizations if they are involved in acts of terrorism, preparation for terrorism, promotion of terrorism, or any other form of terrorism.

2. Property Seizure: To seize properties linked to terrorism, the investigating officer must obtain prior approval from the Director General of Police. When investigations are conducted by the National Investigation Agency (NIA), approval from the Director General of NIA is required for property seizures.

3. Expanded Investigative Powers: The UAPA empowers NIA officers with the rank of Inspector or higher to investigate cases, supplementing the authority of officers with the rank of Deputy Superintendent, Assistant Commissioner of Police, or higher**.**

Source: TH

Indo-Tibetan Border Police (ITBP) Raising Day

Syllabus: GS3/Various security forces and and their mandate

In News

- The **62nd Raising Day of the Indo-Tibetan Border Police (ITBP)** was organised.

ITBP Raising Day History

- The history of ITBP Raising Day goes back to the **Indo-China war in the high-altitude Himalayan region with freezing conditions.**
- These climatic conditions, coupled with the numerical superiority of the Chinese army, ensured **India ended up on the losing side.**
- As a response, **a specialised security force, the ITBP, was constituted. This force since then has guarded the border at high altitudes.**

Indo-Tibetan Border Police(ITBP):

- **Raised on:** 24 October, **1962 during India-China War**
- **Mandate:** ITBP primarily **guards** the nation's 3,488 kilometre long **India-China borders ranging from the Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh.**
    - Additional tasks assigned to ITBP include **anti-terrorism and internal security duties, anti-naxal operations, disaster management,**

UN peacekeeping, VVIP protection and guarding Indian missions abroad.

Various roles played by ITBP:

- Whether it is battling **terrorism in Jammu and Kashmir or Left Wing Extremism in Chhattisgarh,** the ITBP has performed with excellence.
- During the Lockdown, **essential items were supplied by the ITBP to people residing in remote areas.** Various services were rendered by the ITBP in efforts to **fight the spread of COVID-19 in the country.**
- ITBP personnel **also play an active role in making Government of India schemes a success.**
- The ITBP also contributes to the **nation's economic development** by thwarting efforts from across the border aimed at slowing our economic development.

Source: PIB

Nipah virus antibodies found in Wayanad bats

Syllabus: GS3/S&T/Prelims-Facts-CA

In News

- Recently, The Indian Council of Medical Research (ICMR) confirmed the presence of the deadly **Nipah virus (NiV) in fruit bat samples** collected in Wayanad region.

About Nipah virus (NiV)

- **Nature:** It is a zoonotic virus (it is transmitted from animals to humans).
- **Origin:** It was first identified in 1998 during an outbreak in Malaysia, which affected both pigs and humans. It was named after the village of Sungai Nipah in Malaysia.
- **Natural host**: Fruit bats of the Pteropodidae family, specifically the Pteropus genus are considered as host for Nipah virus.
- **Transmission**: It is transmitted to humans through direct contact with infected bats, contaminated fruit or through close contact with infected animals, particularly pigs along with human-to-human transmission.
- **Symptoms:** Fever, headache, dizziness, cough, and respiratory distress leading to encephalitis (inflammation of the brain), seizures, and coma.

How fast does the Nipah virus spread?

- According to the **World Health Organization (WHO)**, Nipah has a relatively high case fatality ratio. The very high death rates contribute to low transmission.
- **Reproductive number (R0)**: It is a measure of how quickly the virus spreads in the population. The reproductive number (R0) in the previous outbreaks of Nipah virus was about 0.48.
- A value less than one means less than one person is being infected by an already infected person. In such a scenario, the outbreak is expected to diminish relatively quickly.

Source: The Hindu

Lemru Elephant Corridor

Syllabus: GS3/Environment and Biodiversity

Context

- Chhattisgarh's request to de-notify coal mines falling under Lemru Elephant Corridor is accepted by the MoEFCC.

About the Lemru Elephant Reserve

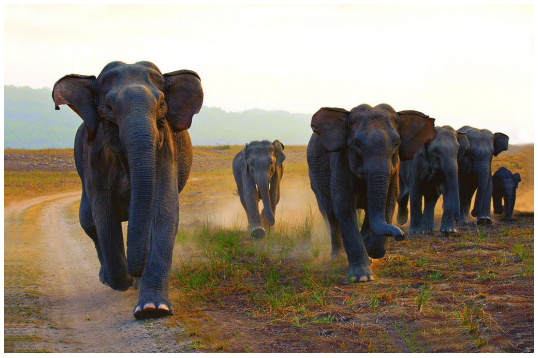
- **Lemru is one of two elephant reserves** (the other is ***Badalkhol Tamorpingla)*** and is part of the Hasdeo Aranya forests in Korba district of Chhattisgarh.
- It is planned **to prevent human-animal conflict** in the region, with elephants moving into Chhattisgarh from Odisha and Jharkhand.
- The reserve is part of **an elephant corridor** that connects **Lemru (Korba), Badalkhol (Jashpur), Tamorpingla (Surguja)**.

Why is the reserve important?

- Elephants are found in five divisions of the state. North Chhattisgarh alone is home to over 240 elephants. More than 150 elephants have died in the state over the last 20 years.

Elephants:

- Elephants are the largest land mammals and keystone species on earth.
- Their nomadic behaviour – the daily and seasonal migrations they make through their home ranges – is immensely important to the environment.



Two types:

- **Asian Elephants** (Elephas maximus indicus):
  - They inhabit **dry to wet forest and grassland** habitats in 13 range countries spanning **South and Southeast Asia.**
  - **IUCN Status: 'Endangered'** on the IUCN Red List of threatened species.
  - Listed in the **Appendix I of the Convention of the Migratory species (CMS)**.
- **African Elephants (Loxodonta cyclotis):** Two subspecies (the Savanna or bush and the Forest elephant)
- **IUCN Status:**
  - African forest elephant: Critically Endangered
  - African savanna elephant: Endangered

Source: PIB

Sporanaerobium hydrogeniformans

Syllabus: GS3/Science and Technology

In News

- In a recently published paper of the journal Archives of Microbiology a bacteria called **Sporanaerobium hydrogeniformans** have been described which produces **hydrogen as a byproduct of its metabolism.**

About

- The Bioenergy Group at the Agharkar Research Institute (ARI), an autonomous institute of the Department of Science and Technology, has been studying anaerobic bacteria in the breakdown of **lignocellulosic wastes** for the past ten years.
    - The woody material that gives plants their rigidity and structure comprises three main types of carbon-based polymer — **cellulose, hemicellulose and lignin — collectively called lignocellulosic biomass.**
- Sporanaerobium hydrogeniformans is a new genus of anaerobic **lignocellulose-degrading bacteria** found in the **hot spring of Aravali,** located in Ratnagiri district of Maharashtra
- The researchers also discovered that the bacteria can grow optimally at high temperatures of **45–50°C and an alkaline pH of 8.0.**

Significance of the Discovery

- The bacteria may be a candidate for **biohydrogen generation** from agricultural leftovers in accordance with waste-to-energy legislation in India.
- The bacterium is a crucial strain for the **industrial generation of biofuels.**
- Additionally, it emphasises the **value of researching microbes in hostile habitats** like hot springs, where rare and important species might be found.
- The scientists are hoping that more research on this bacterium will lead to the creation of **innovative and effective processes for producing biohydrogen gas,** which could decrease reliance on fossil fuels.

Source: TH

Jamrani Dam Multipurpose Project under PMKSY

Syllabus: GS3/ Agriculture

In News

- The Cabinet Committee on Economic Affairs (CCEA) chaired by the Prime Minister, has approved inclusion of **Jamrani Dam Multipurpose Project of Uttarakhand** under **Pradhan Mantri Krishi Sinchayee Yojana-Accelerated Irrigation Benefit Programme (PMKSY-AIBP).**

About PMKSY

- Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) is **Central Sponsored Scheme** (Core Scheme) launched during the year 2015-16.
- It **aims** to enhance **physical access of water on farms** and expand cultivable areas under assured irrigation, improve on-farm water use efficiency, introduce sustainable water conservation practices, etc.
- Government of India has approved implementation of PMKSY during 2021-26 with an overall outlay of Rs.93,068.56 crore.

AIBP component of PMKSY

- It is for creation of irrigation potential through major and medium irrigation projects.
- 53 projects have been completed so far under PMKSY-AIBP and additional irrigation potential of 25.14 lakh hectare has been created.
- Six projects have been included after the AIBP component of PMKSY 2.0 since 2021-22.

Jamrani Dam Multipurpose Project

- **Jamrani Dam Multipurpose Project** is the seventh project to be included in the list.
- It involves constructing a dam near **Jamrani village**, spanning the **Gola River,** a tributary of the **Ram Ganga River,**

Source: PIB

Pink Bollworm

Syllabus :GS 3/Agriculture produce and related constraints

In News

- The cotton crop in North India is under the threat of pink bollworm (PBW) attacks

About Pink Bollworm

- **Scientific Name :** (Pectinophora gossypiella)
- It is a worm that destroys parts of the developing cotton fruit, such as the square (flower bud) and the boll (rounded sac of seeds with cotton fibres).
    - Adult worms are thin grey moths that lay eggs on buds, flowers, and bolls.
    - The larvae hatch from the eggs and burrow into the bolls to feed on the seeds.
    - It cuts through the lint and stains it in the process, resulting in a loss of quality.
- It is considered possibly the **most destructive pest on cotton** worldwide.
- It is **native to Asia** and now recorded in nearly all the cotton-growing countries of the world.
- The Indian government introduced the genetically modified pest-resistant cotton variety **Bt Cotton (Bollgard II seed)** to provide resistance against the American bollworm, pink bollworm, and spotted bollworm.
    - However, the pink bollworm has developed resistance to Bt cotton over time.

Source:DTE

Nano Di-Ammonia Phosphate (DAP) Liquid Fertilizer

Syllabus: GS3/ Agriculture

In News

- Union Home Minister and Minister of Cooperation, inaugurated **IFFCO's Nano DAP (Liquid) plant** at Kalol in Gandhinagar.
    - IFFCO has taken India to first position in the world in **Nano Urea and Nano DAP production.**

About

- Nano-DAP is a **concentrated phosphate-based fertilizer** that offers phosphorus nutrition support throughout the entire crop growth and development cycle. Contains **8% nitrogen and 16% phosphorus** compared to 18% nitrogen and 46% phosphorus contained in the conventional DAP bag.
- DAP is the **second most widely used fertilizer in India**, following urea.
- IFFCO Nano Urea (liquid) is the world's first Nanofertilizers which has been notified by Fertilizer Control Order (FCO, 1985).

Anticipated Benefits

- Nano-DAP is expected to reduce **India's expenditure on fertilizer imports**.
- It is projected to lower the **yearly subsidies** allocated to non-urea fertilizers.
- It will reduce the use of chemical fertilizers helping our land to move towards **natural farming.**
- Targeted nano-DAP application increases **agricultural sustainability** and **environmental safety** by reducing pollution of soil, air, and water.

IFFCO

- **IFFCO, or the Indian Farmers Fertiliser Cooperative Limited** was founded in 1967 and is headquartered in New Delhi, India.
- IFFCO primarily operates in the field of agriculture and agribusiness, focusing on providing agricultural inputs and services to farmers, promoting sustainable agriculture, rural development, and farmer education.
- The cooperative is known for its role in the production and distribution of fertilizers, including urea and other agriculture inputs.

Source: PIB

Indian Army's first Vertical Wind Tunnel (VWT)

Syllabus: GS 3/Defense

In News

- The Special Forces Training School (SFTS) at Bakloh, Himachal Pradesh got the **Indian Army's first Vertical Wind Tunnel (VWT)**.

About Vertical Wind Tunnel (VWT)

- It is a first of its kind in the Indian Army, will deliver simulated training on combat freefall to the special forces
- The state-of-the-art wind tunnel is set to refine the **Combat Freefall (CFF) skills** of armed forces personnel.
- The system offers a **controlled environment**, enabling trainees to enhance their skills by simulating real-life freefall conditions.

Relevance

- The **VWT's integration into the CFF training curriculum** brings forth numerous pay-offs.
    - The **system simulates varied freefall scenarios** which is crucial in assessing individual reactions to numerous situations in an airborne operating environment.
    - It **reduces potential instability in the air** and during parachute deployment thereby assisting trainees to get used to free-fall conditions.
    - The VWT is not only **beneficial for beginners** but also an exceptional resource for **delivering advanced training** to seasoned free-fallers and CFF instructors.
    - It is poised to **greatly enhance the operational readiness** of the future-ready Indian Army, ensuring that the special forces are fully prepared to tackle contemporary challenges of current and future battlefields.

Source:PIB